

### ABSTRACT

A system and method are provided for intravascular nuclear imaging, which is furthermore designed to locate the plaque along the artery and to estimate its thickness. Radiolabeled antibodies directed specific antigens in the atherosclerotic plaque or radiolabeled immunoscintigraphy pharmaceutical, which binds apoptotic cells, have been proposed for detection of vulnerable plaque. Other Radiopharmaceuticals such as Gallium Citrate, radio labeled white blood cells etc. call also be used to illuminate inflammatory processes.